

Training Schedule

Plant Protection (315)

S.No	Schedule		Theory (40 Hrs)		Practical (80 Hrs)		Instructions to the trainer	Key Learning outcomes (After going through the PCP learner will be able to..)
	Week	Day	Topic	Hours	Topic	Hours		
PART 1 (Plant pathology)								
1.	Week 1	Day 1	<ul style="list-style-type: none"> • Introduction to plant pathogens • Characteristics of plant pathogens & nutritional disorders 	2	<ul style="list-style-type: none"> • Identification of plant pathogens • Identification of nutritional disorder symptoms 	3	<ul style="list-style-type: none"> • Use relevant PPTs/ videos showing the plant pathogens. • Explain about nutritional disorder using specimen 	<ul style="list-style-type: none"> • Differentiate between fungi, bacteria and viruses • Distinguish the symptoms of diseases • Differentiate nutritional disorders
2.	Week 1	Day 2	<ul style="list-style-type: none"> • Introduction & life cycle of fungus • Types of fungal diseases 	2	<ul style="list-style-type: none"> • Asexual & sexual reproductive structure of fungal pathogens • Identification of characteristics symptoms produced by fungi 	3	<ul style="list-style-type: none"> • Explain topics using relevant audio video Aids. • Explain various reproductive structure of fungus. • Explain characteristics symptoms using videos/PPTs/charts and specimen. 	<ul style="list-style-type: none"> • Identify life cycle of plant pathogenic fungi • Identify different types of fungal diseases & their characteristics symptoms

3.	Week 2	Day 1	<ul style="list-style-type: none"> • Introduction & life cycle of bacteria • Types of bacterial diseases 	1	<ul style="list-style-type: none"> • Observe growth stages of bacteria • Identification of characteristics symptoms produced by bacteria 	4	<ul style="list-style-type: none"> • Explain about various growth stages of bacteria using relevant audio video Aids and specimen. • Explain characteristics symptoms using videos/PPTs/charts and specimen. 	<ul style="list-style-type: none"> • Identify life cycle of plant pathogenic bacteria • Identify different types of bacterial diseases & their characteristics symptoms
4.	Week 2	Day 2	<ul style="list-style-type: none"> • Introduction & life cycle of viruses & mycoplasma like organism 	2	<ul style="list-style-type: none"> • Identify structure of viruses 	3	<ul style="list-style-type: none"> • Explain about various structure of virus • Explain using relevant audio video Aids. 	<ul style="list-style-type: none"> • Identify life cycle of plant pathogenic viruses & mycoplasma
5.	Week 3	Day 1	<ul style="list-style-type: none"> • Type of viral diseases 	1	<ul style="list-style-type: none"> • Identification of characteristics symptoms produced by virus • Identification of characteristics symptoms produced by Mycoplasma like organism 	4	<ul style="list-style-type: none"> • Explain characteristics symptoms using videos/PPTs/charts and specimen. 	<ul style="list-style-type: none"> • Identify different type of diseases caused by viruses & mycoplasma and their characteristics symptoms
6.	Week 3	Day 2	<ul style="list-style-type: none"> • Diseases of cereals 	2	<ul style="list-style-type: none"> • Identify disease symptoms of Chickpea • Identify disease symptoms of Soybean • Identify disease symptoms of Blackgram • Identify disease symptoms of Green 	3	<ul style="list-style-type: none"> • Explain characteristics symptoms using videos/PPTs/charts and specimen. 	<ul style="list-style-type: none"> • Diagnose different diseases of crop plants • Identify the pathogens causing the diseases • Familiar with the important diseases of major crops; • Describe the symptoms produced by pathogens and their descriptions;

					Gram			<ul style="list-style-type: none"> Describe management practices recommended to keep the diseases under control
7.	Week 4	Day 1	<ul style="list-style-type: none"> Diseases of millets & oilseed crops 	2	<ul style="list-style-type: none"> Identify disease symptoms of Groundnut Identify disease symptoms of Musturd Identify disease symptoms of Sunflower 	3	<ul style="list-style-type: none"> Explain characteristics symptoms using videos/PPTs/charts and specimen. 	<ul style="list-style-type: none"> Diagnose different diseases of millets, oilseeds and cash crops Identify the pathogens causing the diseases Familiar with the important diseases of millets, oilseeds and cash crops
8.	Week 4	Day 2	<ul style="list-style-type: none"> Diseases of cash crops 	2	<ul style="list-style-type: none"> Identify disease symptoms of Cotton Identify disease symptoms of Sugarcane 	3	<ul style="list-style-type: none"> Explain characteristics symptoms using videos/PPTs/charts and specimen. 	<ul style="list-style-type: none"> Describe the symptoms produced by pathogens and their descriptions; Describe management practices recommended to keep the diseases under control
9.	Week 5	Day 1	<ul style="list-style-type: none"> Diseases of plantation crops 	2	<ul style="list-style-type: none"> Identify disease symptoms of Coconut Identify disease symptoms of Arecanut Identify disease symptoms of Coffee Identify disease symptoms of Green Tea 	3	<ul style="list-style-type: none"> Explain characteristics symptoms using videos/PPTs/charts and specimen. 	<ul style="list-style-type: none"> Diagnose different diseases of plantation and fruit crops Identify the pathogens causing the diseases Familiar with the important diseases of plantation and fruit crops Describe the symptoms produced by pathogens and their descriptions
10.	Week 5	Day 2	<ul style="list-style-type: none"> Diseases of fruit crops 	2	<ul style="list-style-type: none"> Identify disease symptoms of Mango 	3	<ul style="list-style-type: none"> Explain characteristics symptoms using videos/PPTs/charts 	<ul style="list-style-type: none"> Describe management

					<ul style="list-style-type: none"> • Identify disease symptoms of Grapes • Identify disease symptoms of Citrus • Identify disease symptoms of Apple 		and specimen.	practices recommended to keep the diseases under control
11.	Week 6	Day 1	• Diseases of vegetable crops	1	<ul style="list-style-type: none"> • Identify disease symptoms of Tomato • Identify disease symptoms of Brinjal • Identify disease symptoms of Chilli • Identify disease symptoms of Bhindi 	4	<ul style="list-style-type: none"> • Explain characteristics symptoms using videos/PPTs/charts and specimen. 	<ul style="list-style-type: none"> • Diagnose different diseases of vegetable crops • Identify the pathogens causing the diseases • Familiar with the important diseases of vegetable crops • Describe the symptoms produced by pathogens and their descriptions • Describe management practices recommended to keep the diseases under control
12.	Week 6	Day 2	• Diseases of other horticultural crops	1	<ul style="list-style-type: none"> • Identify disease symptoms of Jasmine • Identify disease symptoms of Rose • Identify disease symptoms of Crossandra • Identify disease symptoms of Betelvine 	4	<ul style="list-style-type: none"> • Explain characteristics symptoms using videos/PPTs/charts and specimen. 	<ul style="list-style-type: none"> • Diagnose different diseases of horticultural crops • Identify the pathogens causing the diseases • Familiar with the important diseases of horticultural crops • Describe the symptoms produced by pathogens and their descriptions • Describe management

								practices recommended to keep the diseases under control
13.	Week 7	Day 1	<ul style="list-style-type: none"> • Introduction to plant protection methods 	1	<ul style="list-style-type: none"> • Practice roguing of infected plants in a field • Identify soil & seed borne diseases 	4	<ul style="list-style-type: none"> • Demonstrate the roguing of infested plants in nearby field • Explain about soil & seed borne diseases using relevant audio video Aids. 	<ul style="list-style-type: none"> • Practice roguing of infected plants in a field • Classify chemicals on the basis of its nature and methods of application • Choose the effective disease management methods.
14.	Week 7	Day 2	<ul style="list-style-type: none"> • Chemical & biological control of plant pathogens 	2	<ul style="list-style-type: none"> • Practice different types of fungicidal application • Prepare 1% Bordeaux solution 	3	<ul style="list-style-type: none"> • Make prior arrangement for chemical, weighing balance & other equipment required. • Take record of the observations & calculation 	<ul style="list-style-type: none"> • Prepare the fungicidal solution • Calculate the recommended dose of chemical pesticide
15.	Week 8	Day 1	<ul style="list-style-type: none"> • Integrated pest management 	2	<ul style="list-style-type: none"> • Identify Biocontrol agent 	3	<ul style="list-style-type: none"> • Explain about biocontrol agent using videos PPTs/charts and specimen. 	<ul style="list-style-type: none"> • Describe integrated pest management • Use biocontrol agents judiciously

PART 2 (Entomology)								
16.	Week 8	Day 2	<ul style="list-style-type: none"> • Introduction to plant insects 	2	<ul style="list-style-type: none"> • Distinguish the damage caused by insect is internal or external • Make a light trap & record the insect 	3	<ul style="list-style-type: none"> • Use relevant PPTs/ videos showing the plant insects • Demonstrate light trap preparation 	<ul style="list-style-type: none"> • Familiarize with insect causing damage to crop • Identify damage caused by attack of insects • Prepare light trap
17.	Week 9	Day 1	<ul style="list-style-type: none"> • Insect morphology & classification 	2	<ul style="list-style-type: none"> • Draw and label body parts of Grasshopper • List five household pests, beneficial insects, insects harmful to pests 	3	<ul style="list-style-type: none"> • Make prior arrangement for drawing & labeling • Explain characteristics symptoms using videos/PPTs/charts and specimen. 	<ul style="list-style-type: none"> • Demonstrate morphological features of a typical insect • Explain economic importance of Insects • Classify pests based on different categories
18.	Week 9	Day 2	<ul style="list-style-type: none"> • Pests of field crops 	2	<ul style="list-style-type: none"> • Identify pests of Rice • Identify pests of Wheat • Identify pests of Millet • Identify pests of Sugarcane 	3	<ul style="list-style-type: none"> • Explain characteristics symptoms using videos/PPTs/charts and specimen. 	<ul style="list-style-type: none"> • Identify & diagnose the pest responsible for causing a particular damage in field and horticultural crops • Familiar with storage pest damage • Identify symptoms produced by insect infestation and their descriptions
19.	Week 10	Day 1	<ul style="list-style-type: none"> • Pests of horticultural crops 	2	<ul style="list-style-type: none"> • Identify pests of Tomato • Identify pests of Brinjal 	3	<ul style="list-style-type: none"> • Explain characteristics symptoms using videos/PPTs/charts and specimen. 	

20.	Week 10	Day 2	<ul style="list-style-type: none"> • Pests of stored produce 	2	<ul style="list-style-type: none"> • Identify pests of stored produce 	3	<ul style="list-style-type: none"> • Explain characteristics symptoms using videos/PPTs/charts and specimen. 	
21.	Week 11	Day 1	<ul style="list-style-type: none"> • Method of pest management 	1	<ul style="list-style-type: none"> • Practice rogueing of infected plants in a field • Practice different types of insecticidal application 	4	<ul style="list-style-type: none"> • Demonstrate the rogueing of infested plants in nearby field • Ensure safety measures while using chemicals. • Explain about alternate methods of pest management other than chemical treatment 	<ul style="list-style-type: none"> • Practice rogueing of infected plants in a field • Know the nature of chemicals and methods of application of chemicals; • Choose the effective disease management methods
22.	Week 11	Day 2	<ul style="list-style-type: none"> • Introduction to plant protection equipments 	1	<ul style="list-style-type: none"> • Introduction to different types of sprayer 	4	<ul style="list-style-type: none"> • Explain different equipments, their parts & operations using videos/ PPTs/etc. • Demonstrate the equipments used for plant protection & their safety measures. 	<ul style="list-style-type: none"> • Know the different pest control equipment • Know how to apply insecticides effectively • Apply the knowledge of IPM for proper pest control
23.	Week 12	Day 1	<ul style="list-style-type: none"> • Precaution & Safety measures while using pesticides 	3	<ul style="list-style-type: none"> • Safety measures while using pesticides 	2	<ul style="list-style-type: none"> • Explain precautions to be taken while following procedures. • Demonstrate the safety measures while using pesticides. 	<ul style="list-style-type: none"> • Take precautions while using pesticides

24.	Week 12	Day 2		-	<p>Project on any of one of the following topic:</p> <ul style="list-style-type: none"> • Make a herbarium of disease infected plants. • Make a herbarium of insect infested plants. • Make a labelled sketch diagram of plant protection equipments. • Prepare a status report on available bio pesticide in market. 	5	<ul style="list-style-type: none"> • Help learner in completing the project. 	<ul style="list-style-type: none"> • Apply core and generic skills for preparing project.
		Total		40		80		